

Notice of Allowability

Application No.

09/106,784

Applicant(s)

PEDNAULT, EDWIN PETER
DAWSON

Examiner

Samuel Broda

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to BPAI Decision on Appeal dated 7 April 2004.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 29 June 1998 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.



SAMUEL BRODA, ESQ.
PRIMARY EXAMINER

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1. This communication is in response to the Decision by Board of Patent Appeals and Interferences regarding this Application.

Reasons for Allowance

2. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

The closest prior art of record shows:

- (1) a method for operating a neural network with missing and/or incomplete data (Keeler et al, U.S. Patent 5,842,189);
- (2) a simulation study of monitors for detecting departures for initial specifications used to construct a Bayesian network using incomplete data (Cowell et al, "Sequential Model Criticism in Probabilistic Expert Systems");
- (3) a review of methods of constructing decision tree classifiers including data having unknown attributes (Quinlan, "Unknown Attribute Values in Induction"); and
- (4) a method of decomposition of heterogeneous classification problems using an "Importance Profile Angle" statistic (Apte et al, "Decomposition of Heterogeneous Classification Problems).

- 2.1 Applicant's set of claims consists of claims 1-20.

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Independent claim 1 is directed to a program storage device for constructing a predictive model. This claim identifies the distinct combination of features of: “generating a plurality of subordinate models, that together comprise an overall model, in such a way that: a) each subordinate model has an associated set of application conditions that must be satisfied in order to apply the subordinate model when making predictions . . .” and “b) for at least one subordinate model, the training cases used in the construction of that subordinate model include some cases that indirectly satisfy the application conditions such that the application conditions are satisfied only after replacing one or more known data values in these training cases with missing values . . .”

Because the closest prior art does not appear to teach or suggest the combination of generating a plurality of subordinate models in which application conditions are satisfied only after replacing one or more known data values in the training cases with missing values, claims 1-20 are deemed allowable.

3. Any comments considered necessary by Applicants must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

4. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Samuel Broda, whose telephone number is (703) 305-1026. The Examiner can normally be reached on Mondays through Fridays from 8:00 AM – 4:30 PM.

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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kevin Teska, can be reached at (703) 305-9704. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist, whose telephone number is (703) 305-3900.

A handwritten signature in black ink, appearing to read 'S. Broda'.

SAMUEL BRODA, ESQ.
PRIMARY EXAMINER